

What is claimed is:

1. A semiconductor integrated circuit device comprising:

a power transistor that feeds a large current to a load;

a first transistor of which a second electrode and a control electrode are connected respectively to a second electrode and a control electrode of the power transistor;

a second transistor of which one of a first electrode or a second electrode is connected to a first electrode of the first transistor; and

an operational amplifier

of which one input terminal is connected to a first electrode of the power transistor,

of which another input terminal is connected to the first electrode of the first transistor, and

of which an output terminal is connected to a control electrode of the second transistor,

wherein the second transistor outputs, at another of the first and second electrodes thereof, a current signal proportional to a current flowing through the power transistor.

2. A semiconductor integrated circuit device as claimed in claim 1,

wherein the second transistor and the operational amplifier constitute a negative feedback circuit.

3. A semiconductor integrated circuit device comprising:

a power transistor that feeds a large current to a load;

a first transistor of which a second electrode and a control electrode are connected respectively to a second electrode and a control electrode of the power transistor;

a second transistor of which a second electrode is connected to a first electrode of the first transistor; and

a third transistor of which a control electrode is connected to a first electrode of the power transistor and of which a second electrode is connected to a control electrode of the second transistor,

wherein the second transistor outputs, at a first electrode thereof, a current signal proportional to a current flowing through the power transistor.

4. A semiconductor integrated circuit device as claimed in claim 3,

wherein a first electrode of the third transistor is connected to the second electrodes of the power transistor and the first transistor, and a direct-current voltage is applied through a resistor to the second electrode of the third transistor.

5. A semiconductor integrated circuit device as claimed in claim 3,

wherein the second and third transistors are transistors of opposite polarities, and a potential difference appearing between the second electrode and control electrode of the second transistor is substantially equal to a potential difference appearing between the second electrode and control electrode of the third transistor.

6. A semiconductor integrated circuit device as claimed in claim 5,

wherein the second transistor is a transistor of a same polarity as the first transistor.

7. A semiconductor integrated circuit device as claimed in claim 6,  
wherein a first electrode of the third transistor is connected to the second electrodes of the power transistor and the first transistor, and a direct-current voltage is applied through a resistor to the second electrode of the third transistor.